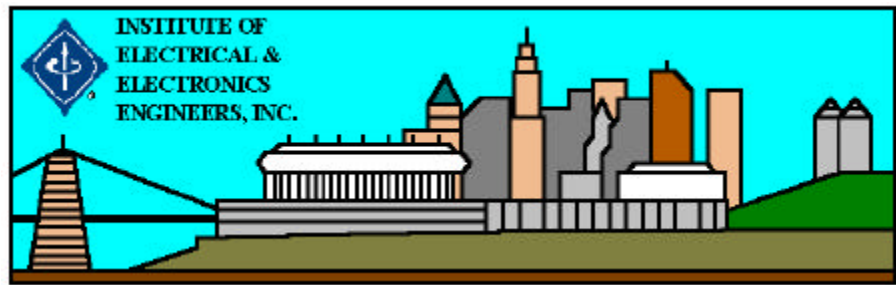


IEEE CINCINNATI
SECTION
NEWSLETTER
OCTOBER 2002



OCTOBER MEETING

VARIABLE SPEED DRIVES

DATE: Thursday, October 24, 2002

PLACE : Raffel's – 10160 Reading Road (see below for directions)

TIME : 5:30 p.m. to 7:00 p.m. - Social Time/Dinner
7:00 p.m. to 8:30 p.m. - Program

COST FOR DINNER: \$15.00 which includes a buffet dinner, soft drinks/coffee, tax & gratuity.
Cost for student members - \$10.00

MENU SELECTIONS: Maryland Crab Cakes, Center Cut Chops with Baked Apples, Country Fried Chicken, Broccoli & Carrot Casserole, Buttered Corn, Whipped Potatoes with Gravy, Tossed Salad with Dressings, Rolls & Butter, Apple Dumplings, Coffee, Tea Iced Tea, Soft Drinks. There is also a bar available for the purchase of alcoholic drinks. Raffel's is located at 10160 Reading Road, south of Glendale-Milford Road on the east side of Reading. Take I-75 to the Glendale-Milford Rd. Exit, go east on Glendale-Milford Road approximately 3/4 of a mile to Reading Rd. and turn right on Reading.

Please call the Cincinnati Section Voice Mailbox at 513-629-9380, by **Noon, Tuesday, October 22, 2002** if you plan to attend. Please leave your **Name, IEEE Member Number,** and **a daytime telephone number.**

ABOUT THE PRESENTATION: This month's meeting of the Cincinnati Section will feature a presentation by Mr. Dan Peterson of Robicon. Robicon has been manufacturing power controllers and variable speed drives since 1964 with installations in 57 countries. They manufacture AC Drives up to 30,000 horsepower, power systems up to 25,000kW, 260kAmp and phase-angle & zero-fired SCR Power Controllers from 15-1200 Amps, plus high frequency power supplies for distinct applications.

This presentation will cover technologically-advanced low and medium voltage variable frequency drives for the operation of standard AC induction motors. Included will be theory of how they operate and their applications.

CHAIR'S MESSAGE

by Tom Grau, Section Chair

The feature presentation at our Section Meeting on September 26, 2002, was given by Mr. Tim Schoch, Deputy Program Manager, Advanced Regional Traffic Interactive Management & Information System (ARTIMIDS). First planning for ARTIMIS was in 1989 and since that time 40 Dynamic Message Signs and 80 closed circuit television cameras have been installed along the interstate highways. Unique mile marker signs were designed and installed every tenth of a mile along the system, giving accurate, location information. The control room is

staffed 24/7 with trained operators along with five special, emergency vans that patrol the roads and offer assistance to stranded motorists. The objective behind all this is safety, reduction of time wasted by standing vehicles and an improvement in air quality.

Did you know that you could get up to date highway information by dialing 5-1-1 or tuning your radio to 530 kHz on the AM dial? On behalf of the Cincinnati Section, I congratulate Tim Schoch on his fine presentation and thank him and David Renshaw for a most enjoyable evening at the ARTIMIS Center.

Allow me to again state the Executive Committee's mission and vision.

Our Mission:

To serve the membership of this Section and to support the Societies that our members belong to.

Our Vision:

To enrich our member skills through program presentations of current technologies and issues.

NEW MEMBERS

The following individuals are IEEE members who are new to our Section:

Monish R. Chatterjee
Tao Chen
Ernesto Enriquez-Torres
Curt R. Eyster
John J. Finocharo
Ken Fischer

Gaoshan Jing
Nathan C. Lee
Yong Lin
G. Badri Narayanan
Jason P. Oliver
Susanna K. Rebholz

Bradford J. Smithwick
Benjamin R. Wilmhoff
Philip A. Wilsey
Zhongming Yang
Hongbing Zhang

We wish to extend our welcome to all of our Section's new members!!!



.night .code

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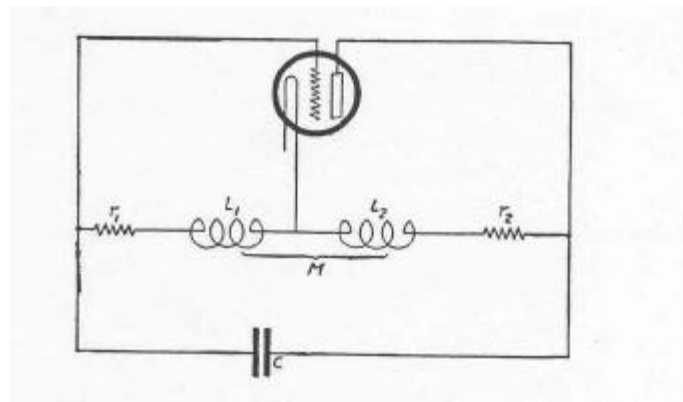
Ralph V. L. Hartley

Fifty years ago this month, the PROCEEDINGS OF THE IRE (Institute of Radio Engineers) included a paper by Ralph V. L. Hartley of Bell Telephone Laboratories. Hartley, who was to receive the IRE Medal of Honor in 1946 in recognition of his early work on vacuum-tube circuits and contributions to information theory, is perhaps most remembered for his invention of the oscillator bearing his name. His 1942 paper concerned an improved way to use the Fourier integral in the solution of transmission problems.

Ralph Vinton Lyon Hartley was born in Nevada in 1888 and graduated from the University of Utah in 1909. He was selected as a Rhodes Scholar, which enabled him to study at Oxford University, from which he received additional degrees in 1912 and 1913. He then returned to the United States to join the research laboratories of the Western Electric Company in New York City.

Hartley joined a group of engineers and scientists who were just beginning to develop vacuum-tube circuits for use in telephonic communication. In particular, he participated in the development of radio receivers used in long-distance radio telephone experiments in 1915. By using several hundred vacuum tubes in parallel, Hartley and his colleagues were able to transmit signals from Arlington, Virginia, to Paris, France, in October 1915. It was during this period that the Hartley oscillator was reduced to practice.

Information about the oscillator and circuit diagrams were included in the classic 1920 book *The Thermionic Vacuum Tube and Its Applications* by Hartley's former colleague Hendrik J. van der Bijl. The circuit normally employed two coils with inductive coupling between them as part of the resonant circuit of the oscillator. By using an iron-core transformer, the oscillator could produce frequencies of less than one hertz. It came to be used commonly as the local oscillator in both AM and FM radio receivers, often being used with pentagrid converters.



The Hartley oscillator, as illustrated in the classic book *The Thermionic Vacuum Tube and Its Applications* by H. J. van der Bijl (McGraw-Hill, 1920).

In February 1925, Hartley published an important paper in the PROCEEDINGS on sidebands in radio. He explained the advantages of single-sideband transmission and carrier suppression. He noted that this technique made possible "a very great saving in the frequency range required per channel," pointing out that, although it

had been developed for wire telephony, he saw no reason why it could not be equally beneficial in radio. Interestingly, this paper included the Fourier integral which was to resurface in his 1942 paper mentioned above.

Hartley became a staff member of Bell Telephone Laboratories when it was established in 1925. He directed a group working on carrier telephony and is credited with formulating the law "that the total amount of information that can be transmitted is proportional to frequency range transmitted and the time of transmission."

An illness forced his temporary retirement beginning in 1934, but Hartley returned to the Bell Labs in 1939 and during World War II worked on problems relating to servo control systems. In 1945 he wrote a memorandum on the transmission of guided beams of light by means of internal reflections in transparent rods. He again retired in 1950 and died in 1970.

*James E. Brittain
School of History, Technology, and Society
Georgia Institute of Technology*

ELECTRICAL WORLD MAGAZINE **125th ANNIVERSARY**

by Bob Morrison, Editor

In 1999, Electrical World Magazine celebrated their 125th anniversary as one of the premier publications for the Electric Power Industry. They presented a history of significant People, Companies, Industry Changes and Innovative Technologies which have served to define the current status of the Electric Power Industry. In the next few months, their article will be reprinted in this *newsletter* (permission granted by McGraw-Hill Publishing Co.)

INDUSTRY

The blackout

Nearly two uneventful decades passed before US public opinion focused once more on the nation's reliance on electric power. On Nov 9, 1965, at 5:16 p.m., the majority of the Northeast lost power as people saw the "lights dim, go up again, then out completely."

The largest power outage in the history of electric power, the Great Northeast Blackout, struck during rush hour. A single transmission line from the Niagara Falls powerplant was tripped, and the resulting domino effect was so dramatic that President Lyndon Johnson, on vacation in Texas, immediately ordered the Federal Power Commission to investigate the incident, which he called "a dramatic reminder of the importance of the uninterrupted flow of power to the health, safety, and well-being of our citizens and to the defense of our country."

Disbelief swept through the US, eventually replaced by mistrust. Americans became skeptical about the reliability and efficiency of utilities. The New York Times commented that "in a society so utterly dependent on electric power, the lengthy delay in determining what caused the great blackout is frightening . . . the utilities are on trial . . . and they must see to it that the public must never again be faced with a total failure of power."

The public's outrage forced utilities to take action, leading to the formation of the North American Electric Reliability Council (NERC) in 1968. Working with the Federal Energy Regulatory Commission, the mission of NERC was, and remains, to ensure reliability and eliminate episodes like the Great Blackout.

Air and oil

Cycles of growth and decline have always affected industry. The Great Depression was followed by the World War II boom and then by the uncertainties that began with the Great Northeast Blackout. By the late 1960s, there was once more optimism on all fronts and the demand for environmentally friendly industries was paramount. The Clean Air Act of 1970 (CAA) required utilities to reduce their emissions of air pollutants, changing the way those industrial giants conducted business.

The CAA was followed by an energy crisis, sparked by the Arab oil embargo, that put a severe strain on the prices of fossil fuels and resources.

Purpa

One of the most significant regulatory milestones occurred at the end of the 1970s. On the heels of the energy crisis, the government decided that the US could forego cheaper electricity as a matter of national security, and thus reduce its dependence on foreign oil. The Public Utility Regulatory Policies Act of 1978 (Purpa) was passed by Congress, obliging utilities to interconnect with, and buy electricity from, qualified suppliers at market value under long-term contracts. Competition was also introduced into the generation market.

Additionally, emphasis was placed on the necessity to develop renewable sources of power.

While Purpa changed the business structure of the industry, a more severe blow fell the following year.

TMI

On March 28, 1979, at the Three-Mile Island (TMI) nuclear powerplant near Harrisburg, Pa, the worst commercial nuclear accident in the country occurred. A severely malfunctioning valve caused the core's cooling water to evaporate, and temperatures in the core rose until some of the uranium in the bottom melted. Though official estimates say that the core was only 30 minutes from a complete meltdown, steps taken quickly re-established control. But the damage was done.

In what CBS news anchor Walter Cronkite termed a "nuclear nightmare," Americans panicked, imagining the worst about nuclear power. Already skeptical, the public now demanded other, "safer" ways to generate power. Even if no lives were lost, the TMI incident was a public relations catastrophe that scarred the future of nuclear power forever. What was once deemed the energy source too cheap to meter, suddenly became the black sheep of the electric power industry.

The public no longer wanted nuclear power, and as a result, by the 1990s utilities stopped building nuclear powerplants in the US.

Deregulation

The last two decades of the 20th century have upheld the theory that nothing in life is as constant as change. Improved information systems have resulted in increasingly complex transmission networks, giving rise to price transparency, power trading and marketing, and financial risk management. More important, as the industry changes, a competitive market is being restored. The most dramatic moment in the new movement came in 1992 with the passage of the National Energy Policy Act (EPAct).

EPAct has made it easier for non-utility generators to enter the market, and has given utilities the power to shop for wholesale electricity. These new policies have already begun to reform the industry.

As another provision of EPOA, states are gradually acquiring the power to deregulate the retail electric market as well. EPOA has brought the industry back to a time when competition and controversy are the order of the day.

TO SUBSCRIBE TO THE ELECTRONIC NEWSLETTER

This newsletter is only available via e-mail or the Section's web page at <http://ieee.cincinnati.fuse.net/> with the exception of new Section members (one issue only) or members who have specifically requested a copy be delivered through the U. S. Mail.

If you are a new Section member and would like to get this newsletter electronically, please contact Bob Morrison (Editor) at 513-287-3697 or by e-mail at j.r.morrison@ieee.org. Provide your name and member number. In case there are questions, please include a daytime telephone number as well.

If you would like the "Snail Mail" version, you must contact Bob Morrison via the above means or call the Section's voice mail at 513-629-9380.

IEEE NEWS

IEEE-USA SEEKS ADDED SAFEGUARDS AGAINST MISUSE OF HEALTH INFORMATION

WASHINGTON (August 26, 2002) - IEEE-USA supports the introduction of additional safeguards into currently drafted legislation or a tightening of current Health and Human Services privacy regulations to protect against the misuse of genetic and other health information by employers that could lead to unfair discrimination in the workplace, according to Frank Ferrante, chair of the organization's Medical Technology Policy Committee (MTPC). Ferrante cited a position of the MTPC adopted by IEEE-USA's Board of Directors on 20 August.

According to the IEEE-USA Board, under certain circumstances, employers should be restricted from requiring, requesting, collecting, purchasing or otherwise obtaining health information about an individual or the individual's family members because such practices could result in unfair discrimination in the workplace. IEEE-USA stated that permission for obtaining health information should be based on whether the requested information is related to a job position, required to support workplace health and safety monitoring, and necessary for other health research activities -- for which the employer should only receive aggregate data, not revealing the identity of individual employees.

According to IEEE-USA, employers now are able to obtain unrestricted access to an individual's health information by requiring that an applicant sign a general medical release following a conditional offer of employment. If the conditional offer is withdrawn, the organization held, an "individual usually has no legal right to an explanation of the reason for withdrawal."

IEEE-USA took special note of the lack of protections against employment discrimination based on sensitive health information relating to an individual's genes. It argued "the current situation discourages the public from seeking out the benefits of genetic testing and impedes the widespread adoption of genetics technologies and the advancement of genetics research."

Further, the organization recommended that employers obtain voluntary written consent from individuals who are requested to undergo medical tests and measurements. IEEE-USA would put the burden of proof on the employer to specify the following: purpose of the test or measurement; details of the analyses to be performed; applicable privacy policies and possible ramifications of the test results; details regarding the storage and

destruction of test samples; process for gaining access to test results and correcting errors in records; and proof of the testing program's compliance with applicable government regulations.

The organization would also add safeguards against discrimination in employment decision-making where an individual's health information may be a contributing factor. According to IEEE-USA, employers should be required to inform an applicant in writing of the reason for retracting a conditional offer of employment. In addition, IEEE-USA would restrict employers from making employment-related decisions based on health "except in cases where that information is necessary to support workplace health and safety or to demonstrate an individual's ability to perform a specific job."

Finally, the organization urged economic incentives be minimized that encourage employers to obtain non-job-related health information for use in their employment decision-making, such as in the determination of group health insurance rates.

IEEE Student Member Concludes IEEE-USA / AAAS Media Fellowship

WASHINGTON (September 4, 2002) - IEEE member Rob Barnett, a graduate student in electrical engineering at Clemson University, concluded his media fellowship with a recent presentation at the American Association for the Advancement of Science (AAAS) building in Washington.

Barnett, the third IEEE-USA / AAAS Media Fellow served his fellowship at Popular Science magazine in New York. He has two articles, "Power Train" and "Hug an Invertebrate" appearing in the October issue. Barnett, who is specializing in power engineering, said improved communication skills are important for all engineers.

"Even if they're not interested in writing, a lot of engineers lack communication skills," said Barnett, who has been asked to free-lance for Popular Science. "So a program like this is good for developing those skills."

The AAAS Mass Media Science & Engineering Fellows Program has produced more than 400 alumni and will enter its 30th year next summer. It is designed to strengthen the connections between scientists and journalists by placing advanced science students in newsrooms across the country. For more information, contact Katrina Malloy at (202) 326-6670 or go to <http://ehrweb.aaas.org/massmedia.htm>.

For more information on the IEEE-USA / AAAS Media Fellows Program, go to <http://www.ieeeusa.org/newspubs/massmedia.html>.

President's Column, September 2002 By LeEarl Bryant, 2002 IEEE-USA President

Helping the Unemployed Member

Are you unemployed? Afraid you might be in the near future? Trying to encourage and assist those who are? If so, you might think that IEEE-USA and the rest of the IEEE have really not shown much activity toward assisting our members. No matter how much we've done, we can never do enough. Enough would include forecasts of engineering employment downturns and the industries affected, forecasts of skills that will remain in demand during expected downturns, and effective policy actions that will smooth the ups and downs of engineering employment, and not inflate the engineering workforce to the point of employment risks for those in the profession.

Doing enough would also mean that IEEE-USA, other engineering organizations, employers, and educators would work as a team to identify available cost-effective training programs on subjects that the employers will accept as meeting their present and near-term needs for engineers and computer scientists. If we were doing

enough, we would also have an abundance of materials and section-level activities that would assist members in understanding how to become pro-active in developing your long-term career viability plan and the resources for helping to carry through with successful plans.

If you wonder why you haven't been deluged with communications from IEEE-USA on how to get your next employment opportunity, it's simply because I didn't feel that we had accomplished enough that you would consider of value. The good news is that IEEE-USA volunteers have developed a multitude of resources over the years that are still available for the benefit of our members. Our first challenge is to review and update these materials and make sure that they are easily accessible at our Web site. Our second challenge is to add resources.

IEEE-USA now has a user-friendly Web site for accessing our employment assistance resources and selected resources that may assist you in planning your longer-term career: <http://www.ieeeusa.org/careers/help/>. Other career resources include:

IEEE Job Site employment listings: <http://jobs.ieee.org/recruiter.html>

Engineer's Guide to Lifelong Employability - ordering information; free unemployed members: <http://www.ieeeusa.org/catalog/lifelong.html>

Alliance of IEEE-USA Consultants' Networks (AICN) - attend local CN meetings for ideas on how to network, market yourself, find employment opportunities and role models, and learn about contracting and consulting: <http://www.ieeeusa.org/business/aicn.menu.html>

IEEE-USA Consultants Database - This premier service matches prospective clients with the world's finest electrotechnology and information-technology professionals-for-hire: <http://www.ieeeusa.org/business/consultants>

Careers and Education - <http://www.ieeeusa.org/careers/>

USAJOBS - This is the U.S. Federal Government's official one-stop source for Federal jobs and employment information: <http://www.usajobs.opm.gov/>

Professional Career Time Line - <http://www.ieeeusa.org/newspubs/features/careertimeline.htm>

10 Reasons to Become a Professional Engineer - lists advantages for becoming a registered engineer <http://www.ieeeusa.org/careers/ieeepep1.ppt>.

Short-term Employment Opportunities

Are there any real areas to focus on in the short term for available jobs? As far as I can tell, present employment opportunities are defense contracting, security contracting, government agencies (primarily related to defense and security) and precollege education. I also understand there is a need for government patent examiners, but you must be willing to relocate to the Washington, D.C., area.

At this time, I must admit that the best resources and encouragement for the unemployed and underemployed are those closest to home. Thus, I challenge you to take the time to communicate with and encourage those you know who are unemployed. The hand of friendship, understanding and sharing of yourself are the most important gifts you can give to those searching for jobs. The second category of important gifts includes job leads and networking leads. In addition, you can extend these gifts by volunteering in these capacities for your section.

Even though I am late with this communication, I believe that IEEE-USA now has a team in place that is achieving a level of synergism that should provide some guidance for developing winning strategies and attitudes while job searching, and pointers to employment opportunity resources.

Employment Assistance Team

IEEE-USA's informal employment assistance team is directed by Bob Adams, vice president for member activities, and Lee Stogner, vice president for member services, with work performed by members and staff representatives of the Employment and Career Services Committee, our Communications Committee, and our Professional Activities Committee for Engineers (PACE) coordinating Committee.

Our PACE Committee, chaired by Don Hill, is responsible for communicating with and activating members of the IEEE-USA PACE Network. The PACE Network is comprised of members of the IEEE-USA PACE coordinating Committee, Regions 1-6 PACE Committees, and section/chapter PACE representatives. Ideally, the local PACE representatives include local employment coordinators. The latter are local volunteers who have accepted the responsibility of ensuring that IEEE-USA employment assistance resources are communicated locally, and will work to assist those who are unemployed. If your section doesn't have an employment coordinator, please ask them to find one. As a minimum, your section's PACE chair should have already received communications on this subject from your regional PACE chair.

Ken Doniger is the recently appointed chair of our Employment and Career Services Committee. The committee, which develops and identifies employment assistance resources, is reviewing the existing resources (listed above) and updating as quickly as possible. The committee has studied the Quick Response Team (QRT) resource that was sponsored by sections experiencing high unemployment. With this local section sponsorship, QRT traveled to the location and presented workshops on how to prepare for and get your next job.

Since most major corporations have services similar to those provided by the QRT, the Employment and Career Services Committee decided to update some of the presentations associated with the QRT workshops and to make them available in Power-Point form for those sections/chapters that need to provide such a workshop for their members. The updated QRT modules cover the job interview, resumes, and cover letters. Your section, chapter or region can obtain copies of these PowerPoint presentations by contacting staff member Scott Grayson at s.grayson@ieee.org.

The Employment and Career Services Committee is also reviewing other employment related resources and updating as appropriate. In addition, the committee is working with the rest of the Employment Assistance Team to identify other activities that may shorten the time required for members to obtain their next job.

The committee sent out the IEEE-USA 2002 Employment Survey over the web on July 29 with notification to approximately 3,800 U.S. IEEE members who signed up for the unemployment dues discount. With the employment climate worsening for technical professionals, IEEE-USA conducted the survey to determine the current causes and characteristics of engineering unemployment and to discover what techniques are proving most effective for regaining employment. All data has been collected and will be available soon. It will be shared with the Workforce Committee and the Career Policy Committee. If the PACE Committee thinks they have a role, it will be made available to it as well.

The last committee with a major role on the Employment Assistance Team is our Communications Committee. These volunteers and staffers have the responsibility of working with other team members to identify available resources and help to carry the messages to our members - you, Regions 1-6, our sections and our PACE Network.

Now, there are other members of the team who are often unknown and remain nameless. They are the backbone of our organization - you. Without you we wouldn't have a reason for being and wouldn't have means for fulfilling the responsibilities of a 501-C3, nonprofit technical society. With your assistance we can assist our unemployed members, identify and develop resources, and make a changes for the better of our membership and society by having a strong and viable U.S. workforce of skilled and talented electrical and computer science engineers and associated professionals. If you have ideas that we should be pursuing, you can let us know by contacting me at president@ieeeusa.org.

Other Related Career/Professional Activities

This column is focusing on employment resources for our members. Don't forget that we are also working on policy and related issues that do not specifically address short-term employment needs. The two primary committees in this area are the Workforce Committee, chaired by Sylvia Thomas, and our Career Policy Committee chaired by long-term career activist George McClure. These two committees are conducting a survey on skills identified over the past few months on engineering-placement ads, designing ads for a select number of major newspapers to increases out-reach to members in areas of high unemployment, increasing communications with Congress on issues related to engineering unemployment, and to sponsor a national workshop on the status of the engineering workforce.

Again, if you have ideas on what we should be doing or how we could do it better, please let me know. Also, don't be afraid to volunteer as one of those who can bring about change. And if you still don't have a clue of what should be done, study your IEEE election ballot and vote for the members who can take IEEE-USA and our Institute in the direction that you think we should be going.

IEEE-USA TODAY E-ZINE on "Building Careers & Shaping Public Policy" September 2002

ACTION ALERT: IEEE-USA CALLS ON U.S. IEEE MEMBERS TO ENGAGE LAWMAKERS ON UNEMPLOYMENT

In response to rising engineering unemployment, IEEE-USA is calling on U.S. IEEE members to write their U.S. Representatives and Senators in order to educate them on how unemployment affects engineers, and to urge lawmakers to take action.

Go to the Legislative Action Center and make your voice heard at <http://capwiz.com/ieeeusa/issues/alert/?alertid=435666&type=CO>.

IEEE-USA SEEKS SAFEGUARDS AGAINST MISUSE OF HEALTH INFORMATION

IEEE-USA supports introducing additional safeguards into currently drafted legislation or tightening current U.S. Department of Health and Human Services privacy regulations to protect against the misuse of genetic and other health information by employers.

Go to the news release at <http://ieeeusa.org/releases/2002/082602pr.html>.

SEPT. EDITION OF "IEEE-USA TODAY'S ENGINEER" WEBZINE SPANS ENTREPRENEURSHIP TO BROADBAND

Additional articles cover "Setting Yourself Apart With Soft Skills," "Successful 'Paid' Consulting," and "Biotechnology: The Key to Sustainable Global Development."

Go to the latest Sept. issue at <http://www.todaysengineer.org>.

U.S. IEEE STUDENT MEMBER CONCLUDES MASS MEDIA FELLOWSHIP

U.S. IEEE member Rob Barnett, a graduate student studying electrical engineering at Clemson University, concluded his 10-week media fellowship assignment this summer at "Popular Science" with a presentation at the American Association for the Advancement of Science in Washington, D.C.

Go to the news release at <http://ieeeusa.org/releases/2002/090402pr.html>.

'IEEE-USA IN THE NEWS' SPOTLIGHTS CAREER/POLICY MEDIA COVERAGE

Every week, issues IEEE-USA champions for U.S. IEEE members are covered in newspapers, magazines and electronic media worldwide.

For the latest IEEE-USA coverage in "ComputerWorld", Cox Newspapers and "The Minneapolis Star Tribune", go to <http://ieeeusa.org/newspubs/inthenews.html>.

"VOICES OF INNOVATION" : IEEE MEMBERS NEEDED FOR RADIO PROGRAM ON ENGINEERING WONDERS

VOICES OF INNOVATION, two-minute spots featuring engineers talking about their innovations, careers and work, are now being aired on local public and commercial radio stations. If you have an idea that could help improve the public's understanding and awareness of engineering, your story could join this exciting new program. To listen to the spots currently being aired and to participate in the American Association of Engineering Societies-sponsored project, go to <http://www.voicesofinnovation.org>.

Older Engineers Face Longer Unemployment, IEEE-USA Survey Shows

WASHINGTON (September 27, 2002) - Older electrical and electronics engineers are out of work longer than their younger peers and cite age as a barrier to re-employment, the 2002 IEEE-USA Unemployment Survey reveals.

For each additional year of age, unemployment duration increases 1.3 weeks. But using three variations of multiple regression estimates and seven control variables, the impact of age was more dramatic. In this case, for each additional year, joblessness rises by three weeks.

Additionally, those reporting age as a barrier to reentering the workforce face longer lengths of unemployment (55 weeks) than those who do not (30 weeks).

Dr. Laura Langbein, a professor of public affairs at The American University in Washington, D.C., analyzed and reported the results. The entire report is available at <http://www.ieeeusa.org/careers/survey/2002results.pdf>.

"Overall, age appears to have a persistent effect on the duration of unemployment," Langbein wrote, "but it cannot be determined from these surveys whether that is attributable to productive differences, price differences, the supply of engineers, age discrimination, or some other factor."

The survey, which IEEE-USA has conducted four times, the last in 1998, was mailed to the 2,955 U.S. IEEE members who reported being unemployed at some time during the 2001-02 membership year. The responses totaled 758 responses, or 26 percent.

The survey also revealed that each additional year of experience helps to reduce unemployment by two weeks. For example, when comparing two engineers of the same age (say 55), one with 30 years experience vs. one with 25, the younger one has 10 fewer weeks of joblessness. When comparing two engineers, one 55 and one 60, both with 30 years experience, the older engineer can expect to endure 15 more weeks of unemployment than his younger peer. Both examples assume that the engineers are comparable in all other respects, including education.

The IEEE Cincinnati Section Executive Committee

Member Names and Phone Numbers

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Orest Melnyk - Treasurer	513-397-5419, o.melnyk@ieee.org (E-mail)
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